

Client's Ref.:
File: 7084-A21007PCTUS/Chiumeow/Kevin revised/f1

What is claimed is:

1 1. A prophy chip, mounted on the top of a dental
2 rotary instrument for cleaning, polishing, and burnishing
3 teeth, comprising:

4 a hollow cup-shaped core with canopy (semispherical),
5 cylindrical, cupped, conical, inverted conical, or disk
6 profile;

7 a shaft containing a connecting means for connecting
8 the prophy chip to the dental rotary instrument to avoid
9 vibration around the rotation axis of the core during
10 rotation;

11 a hydrophilic grindstone sponge covering the core,
12 wherein the hydrophilic grindstone sponge comprises a
13 grindstone therein; and

14 a shank-equipped or undulated latch plate fixing the
15 hydrophilic grindstone sponge by folding the edge thereof
16 into the interior or the bottom of the core, or for
17 gripping;

18 wherein the hydrophilic grindstone sponge is immersed
19 in water prior to operation or absorbed saliva during
20 operation without using a polishing paste to dissipate heat
21 generated by friction.

1 2. The prophy chip as claimed in claim 1, wherein the
2 hydrophilic sponge is hydrophilic latex sponge, or
3 polyurethane sponge, and the hydrophilic latex sponge or the
4 hydrophilic polyurethane sponge comprises a grindstone of
5 $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$ or $\text{Ca}_{10}(\text{PO}_4)_6\text{F}_2$ as a wet grindstone sponge
6 covering the core.

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1 3. The prophylaxis chip as claimed in claims 1 or 2,
2 wherein the hydrophilic sponge further comprises at least
3 one water soluble agent consisting of a foaming agent, a
4 sweetener, a fragrance, a medicament for inhibiting or
5 preventing periodontal diseases or dental caries, or a
6 coating agent.

1 4. The prophylaxis chip as claimed in claims 1 or 2,
2 wherein the core is reticular or porous and at least one
3 water soluble agent consisting of a foaming agent, a
4 sweetener, a fragrance, a medicament for inhibiting or
5 preventing periodontal diseases or dental caries, or a
6 coating agent is disposed in the hollow portion of the core,
7 or the core is filled with a water-retaining sponge immersed
8 in the water soluble agent, wherein the water soluble agent
9 is releasable from the surface of the hydrophilic grindstone
10 sponge covering the core.

1 5. The prophylaxis chip as claimed in any one of claims 1-
2 4, wherein the outside of the core is nonwoven to maintain
3 the grindstone and has hydrophilicity and flexibility.

1 6. The prophylaxis chip as claimed in any one of claims 1-
2 4, wherein the outside of the sponge covering the core is a
3 three-dimensionally continuous, porous film for conducting a
4 solution from a flexible polishing agent.